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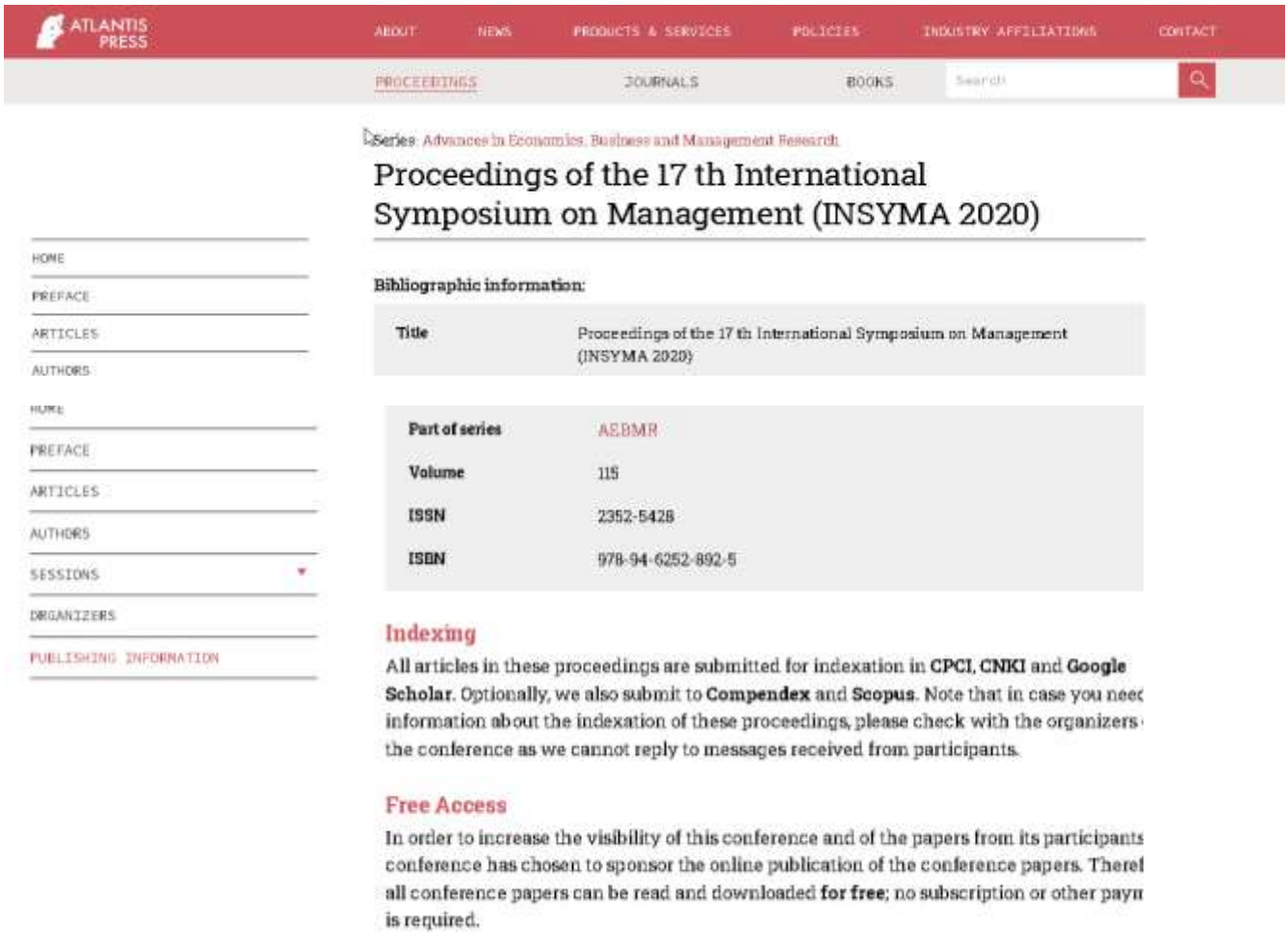

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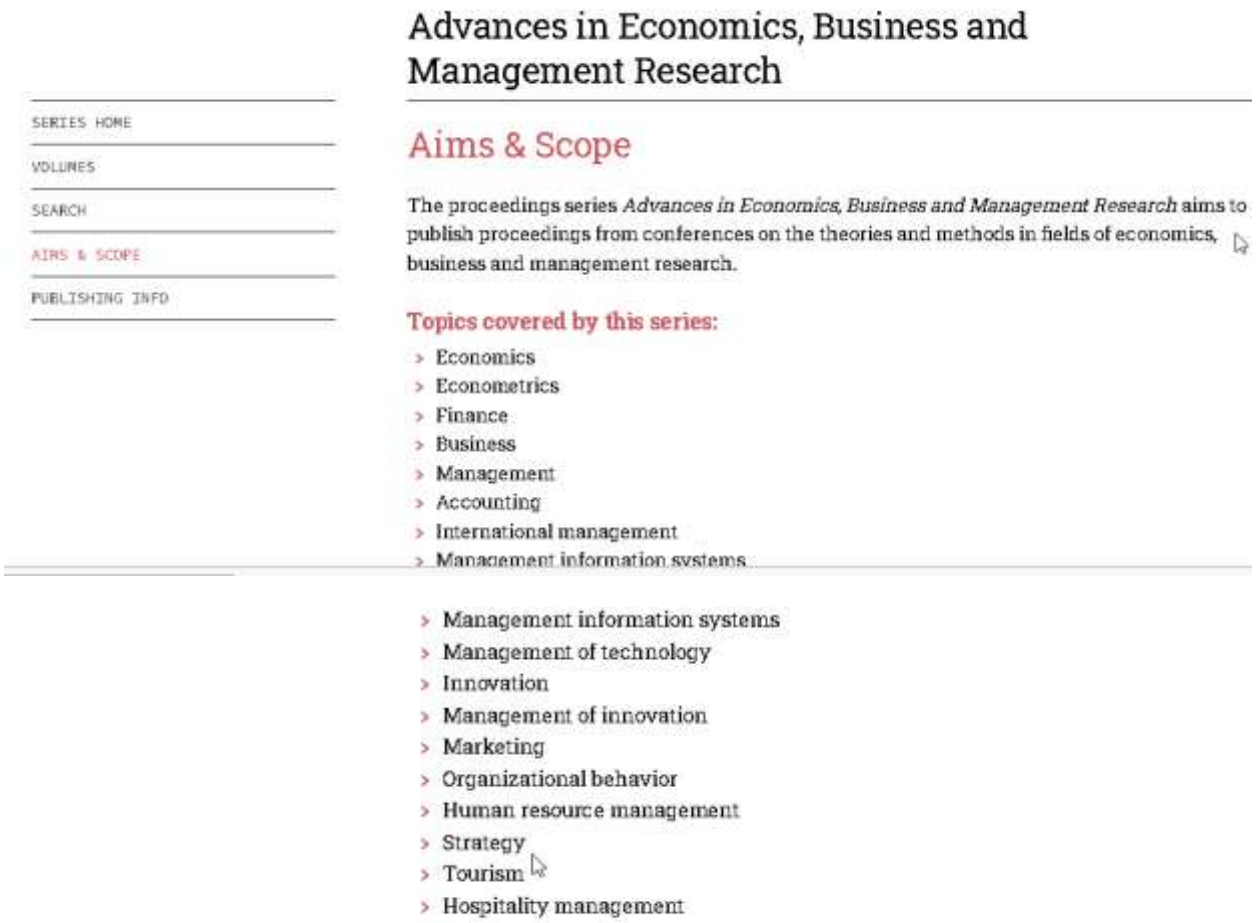

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The Effect of Illiquidity on Stock Return on the Indonesia Stock Exchange

E. Ernawati & A. Herlambang
University of Surabaya, Surabaya, Indonesia

ABSTRACT: This research is the development of research that has been done by Nanlohy et al. (2018). Nanlohy used the object of the Consumer Goods Sector Companies over the 2011-2015 period, while this study used the objects of all companies listed on the Indonesia Stock Exchange over the 2013-2017 period. The purpose of this study was to examine the effect of illiquidity and other stock characteristics, including size, beta, risk, and dividend yield on stock returns. Companies that met the criteria to be the object of research were 67 listed companies from 555 listed companies. The data used was panel data that was processed using multiple linear regression models with the help of Eviews 8. The results obtained from this study were liquidity had a significant negative effect, size had a significant positive effect, and risk had a significant positive effect. Whereas beta had no significant negative effect and dividend yield had no significant positive effect.

Keywords: Illiquidity, stock characteristics, stock return.

1 INTRODUCTION

Stock liquidity is a critical factor for investors to consider because liquidity is related to the speed and ease of a stock to be traded so that it will affect the stock price and also stock return. Several researchers have tested the effect of illiquidity on stock returns. The results obtained were not consistent with each other.

Amihud & Mendelson (1989), Amihud (2002), Cao & Petrasek (2014), and Amihud (2015) in Nanlohy et al. (2018) examined the effect of illiquidity on stock returns. Research by Amihud & Mendelsen 1989 was conducted using the New York Stock Exchange (NYSE) stock trading data over the 1960-1979 periods. Amihud (2002) used the NYSE stock trading data over the 1964-1997 periods. Cao & Petrasek (2014) conducted during the financial crisis, used US company stock data listed on the NYSE, AMEX, and NASDAQ over the 1993-2011 periods. Whereas Amihud 2015 examined the stock market in 45 countries consisting of 19 emerging markets and 26 developed markets over the 1990-2011 period. The results obtained remain consistent that illiquidity has a positive effect on stock returns.

Harris & Amato (2019) have replicated Amihud 2002 research. The research used NYSE trading data sourced from the same database, namely the Center for Research of Securities Prices (CSRP) and the same period (1964-1997) as well as a simpler annual mean of stock's daily illiquidity measurement. The results obtained were also the same, that illiquidity has a positive effect on stock returns. Harris & Amato (2019) also carried out additional analyzes over the 1998-2015 period. The result remained significant, but the strength of its positive influence disappears and turns into negative. Marzva (2019) also examined the effect of illiquidity on stock returns on the Johannesburg Stock Exchange with monthly time series data over the 2007-2016 period. The results obtained remain the same, that illiquidity has a positive effect on stock returns.

Besides illiquidity, the independent variables studied by Nanlohy et al. (2018) were size, risk, dividend yield, and beta. The results obtained are size, risk, and dividend yield have a negative effect, while beta has a positive effect on stock return. The effect of size on stock returns was examined by Situmeang & Muharam (2015) and Farhan & Sharif (2015), found a negative relationship between size and stock return. Tapa & Hussin (2016) and Chiang & Zhang (2017) also examined the effect of risk on stock returns and obtained results that risk has a negative effect on stock returns.

The effect of dividend yield on stock return is in accordance with the relevant dividend theory developed by Gordon & Lintner (1956) in the bird-in-the-hand argument put forward by Gitman & Zutter (2012), that dividend yield has a negative effect on stock return.

The effect of beta on stock return was investigated by Theriou et al. (2004) and Murhadi & Irawan (2012),

who found beta results to be positively related to stock returns. Theriou et al. (2004) find a positive relationship when the market is up.

This study aims to examine the effect of illiquidity, size, risk, dividend yield, and beta on stock return on companies listed on the Indonesia Stock Exchange over the 2013-2017 period. The hypotheses to be tested are:

H1: Illiquidity has a positive effect on stock return;
H2: Size has a negative effect on stock return;
H3: beta has a positive effect on stock returns;
H4: Risk has a negative effect on stock return;
H5: Dividend yield has a negative effect on stock return.

2 RESEARCH METHODS

This research is categorized as basic research, namely research that results in the form of scientific development or the discovery of new theories. The approach used was quantitative because the data were quantitative and processed using quantitative methods. Based on its objectives, this research is causal-conclusive research, which is a study that discusses the causal relationship, tests hypotheses, and draws conclusions. The population of this research was 555 companies listed on the Indonesia Stock Exchange (BEI) over the 2013-2017 period. While the target population were companies that met the following criteria: (1) Companies that are not from the financial and investment sectors, (2) have audited financial statements over the 2013-2017 period, (3) completed stock price data over the 2013-2017 period, and (4) did not carry out stock split and reverse stock. The data used in this study was secondary data obtained from various sources. This study used historical data taken from the Indonesia Stock Exchange (www.idx.co.id) in the form of financial statements and stock prices. Data was also obtained from the Yahoo Finance website (www.finance.yahoo.com).

The measurement level in this study was the ratio scale, which is a unit that reflects the actual value. The independent variables were liquidity, size, beta, risk, and dividend yield, while the dependent variable was stock return.

The formula for measuring illiquidity is:

$$ILLIQ_{iy} = 1/D_{iy} \sum_{t=1}^{Diy} |R_{iyd}| / VOLD_{iyd}$$

where:
$ILLIQ_{iy}$ = illiquidity of share i in year y
D_{iy} = number of days share i in year y
R_{iyd} = stock return on day d year y
$VOLD_{iyd}$ = volume of stock i on day d of y

Size variable was measured using the formula:
Size = Ln market capitalization
Beta variable was measured using the formula:
Rj = a + bRm

Where:
Rj = stock return
Rm = market return
a = intercept of regression

Risk variable was measured using the formula:

$$\sigma = \sqrt{\frac{\sum_{i=1}^{N}(R_{it} - \bar{R}_i)^2}{N-1}}$$

Where:
σ = standard deviation
N = number of periods
R_{it} = return in period i
$\bar{R}_i$ = Average return for the period

Dividend yield was measured using the formula:

$$Dividend\ yield = \frac{\text{Dividend per share outstanding}}{Price\ per\ share}$$

While the stock return as the dependent variable was measured by the formula:

$$Rt = ln\frac{Pt}{Pt-1}$$

where:
Rt = return at time t
Pt = Share price at time t
Pt-1 = Share price at time t-1

This study used multiple linear regression analysis as a data processing method. This analysis was conducted to determine the effect of the independent variables on the dependent variable. As the data used was panel data, Eviews 8 was used for data processing. The multiple linear regression model can be stated in the following equation:

$$Rt = \alpha + \beta_1 ILLIQ + \beta_2 SIZE + \beta_3 BETA + \beta_4 STDEV + \beta_5 DYIELD + e$$

Where:
Rt : Stock return
α : Constant
ILLIQ : Illiquidity
Size : Company size
Beta : Beta (systematic risk measurement tool)
STDEV : Risk
DYIELD : Dividend yield
E : Error term

3 RESULT AND DISCUSSION

After the data collection and tabulation process have been completed, the next step was to process the data using descriptive statistics. In accordance with the population characteristics that have been set, then the number of companies that met the criteria were 67 companies listed on the Indonesia Stock Exchange. With a research period of 5 (five) years, namely 2013-2017, the data studied 335 observations. The following table 1 presents the results of data processing with descriptive statistics for the variables used in this study.

Table 1. Descriptive Data of Companies Listed on the Indonesia Stock Exchange over the 2013-2017 period

	STOCK RETURN	SIZE	BETA	DIVIDEND YIELD	RISK	IL-LIQ
Mean	0.007	29.528	0.773	0.394	0.105	6.780
Median	0.002	29.633	0.728	0.018	0.091	2.100
Maxi-mum	0.397	33.687	1.964	35.693	0.678	0.074
Minimum	-0.095	25.377	-0.362	0.002	0.022	-0.030
Std. Dev.	0.040	1.868	0.559	3.194	0.066	0.005
Skewness	3.173	-0.232	0.129	9.601	4.289	11.937
Kurtosis	29.721	2.502	1.936	98.507	33.103	220.798
Jarque-Bera	10,528.460	6,460	17.883	132,468.200	13,675.590	670,081.40
Prob.	0.000	0.039	0.000	0.000	0.000	0.000
Sum	2.205	9,891.788	258.721	131.902	35.116	0.023
Sum Sq. Dev.	0.540	1,165.754	104.521	3,406.830	1.467	0.007
Obs.	335	335	335	335	335	335

Sumber: Hasil pengolahan data

Before conducting data processing using multiple linear regression models, the classical assumption test was performed first.

Table 2. The Results of Regression Analysis

Variable	Coefficient	Std. Error	t-Statistic	Probability	Hypo-thesis
C	-1.381301	0.130798	-10.56055	0.0000	
ILLIQ.	-0.391833	0.230277	-1.701569	0.0900*	Positive
SIZE	0.046033	0.004431	10.38869	0.0000***	Negative
BETA	0.005906	0.004235	1.394727	0.1643	Positive
RISK	0.225817	0.022735	9.932638	0.0000***	Negative
DIVIELD	0.001070	0.000947	1.130239	0.2594	Negative

*, significance at the 10% level; **, significance at the 5% level; ***, means significance at the level of 1%.
Source: Data processing results

Afterward, the model compatibility test was performed by using the Chow test and Hausman test, both with random effects and fixed effects. The Hausman gives the best results, as presented in table 2.

Based on table 2, it is known that illiquidity had a negative effect on stock return with a significance level of 10 percent. These results are not in accordance with the formulated hypothesis that illiquidity has a positive effect on stock returns. Harris and Amato (2019), who replicated Amihud's 2002 research, found the same results when using the same data used by Amihud. However, when the research was expanded with the 1998-2015 data, the results turned negative, even though it still has a significant effect. The strength of the positive influence was lost and turned negative. Application of the 2002 Amihud method by Harris and Amato (2019) in more recent data shows that the results of Amihud in his analysis turned out to be time-dependent.

For insignificant results (significant at the 10 percent level) Chelley-Steeley et al. (2015) stated that the illiquidity ratio could be a biased measurement when the measurement period includes non-trading days, i.e., days on which securities are not traded. Measurement problems arise because there is zero trading volume. The mathematical software used to calculate liquidity ratios cannot be divided by zero. The elimination of the zero volume has an impact on the absolute nature of the return, which serves to reduce the liquidity ratio, thus causing the illiquidity ratio to increase. The overall effect of this problem increases the bias in the ratio. Therefore, illiquidity is not significant for stock return.

Size had a positive and significant effect, with a significance level of 1 percent. The higher the company size, the greater the stock return given. These results are not in accordance with the formulated hypothesis that size has a negative effect on stock returns. Mohanty (2002), in her research, found that size is positively related to stock return. She did not deny the opinion of Fama and French in their research in 1993, 1995, and 1996 that size is a proxy for several risk factors and premium size is the price of that risk. It is also possible that market inefficiencies cause premium size. In a related study, it was found that the measure used might indeed be a proxy for risk. However, this does not explain all the differences in the returns between small and large stock portfolios. Patel (2012), in his study, using the 1996-2010 period, compared small with large firms in developed stock markets and emerging stock markets using premium size (small firm return minus large firm return). He stated that both the size effect and

the reverse size effect in developed stock markets and emerging stock markets are no longer available. The premium size found in developed stock markets is positive for 10 years and negative for 4 years, whereas premium size for emerging stock markets was found to be negative for 5 years and positive for 9 years. This shows the existence of inconsistent results.

The beta variable had a positive effect, but it was not significant. The significance level found was 0.1643 or 16.43 percent. The positive relationship between beta and stock return shows that the higher the systematic risk as measured by beta, the greater the stock return. The positive relationship between beta and stock return is supported by Theriou et al. (2004) results. In his research, he distinguished between positive and negative market excess returns because without that distinction will result in a flat unconditional relationship between return and beta. By using conditional CAPM and cross-sectional regression analysis, the evidence in this paper tends to support significant positive relationships in the upmarket and significant negative relationships in the down market. Considering the period of this research is 2013-2017, where the condition of the Indonesia Stock Exchange (IDX) was up, then the relationship found is positive. Unfortunately, the results obtained from hypothesis testing were not statistically significant. This is explained by Novak and Petr (2010) that the relationship between beta and stock return does not apply on average, or the size tested may not be able to capture risk effectively. Factors such as the type of corporate governance and the economic structure of a business organization can also influence the significance of the risk factors considered.

Risk had a significant positive effect with a significance level of 1 percent, which means the higher the risk, the greater the stock return the investor wants. The results of this study are not in accordance with the formulated hypothesis that says the relationship between risk and stock return is negative but in accordance with the results of the research by de Mendonça et al. (2012) who found a positive relationship between risk and stock return. He examined idiosyncratic risk and conditional idiosyncratic risk with stock returns in the Brazilian stock market throughout July 2005-December 2010. He indeed used two types of models to achieve his research objectives, namely, first, residuals of regressions based on the Fama and French Three-Factor Model to estimate idiosyncratic volatility, and secondly, the EGARCH model, to estimate conditional volatility.

The dividend yield variable had a positive effect meaning that the higher the dividend yield, the greater the stock return obtained. However, the results of hypothesis testing are not significant. This positive relationship is in line with the findings of Lemmon and Nguyen (2017), who examined the relationship between dividend yield and stock return with the study sample were all listed stocks of the Hong Kong Stock Exchange over the 1981-2010 period. The variables in this study consisted of the dependent variable, namely stock return and the independent variables, namely size and dividend yield. Lemmon and Nguyen (2017) found that dividend yield has a positive effect on stock return, while size has a negative effect on stock return. Nguyen (2017), in his research on Stock Market Liquidity: Financially Constrained Firms and Share Repurchase" also found the same results that dividend yield has a positive effect on stock return. The dividend yield is treated as a control variable in testing stock market liquidity. He found that dividend yield has a significant positive effect on both constraints and unconstrained firms. The higher the dividend yield, the more liquid stocks are. Liquid stocks are stocks that are preferred by investors, so they are more widely bought and have an impact on rising stock prices and, subsequently, on stock returns. The shares of constraint firms tend to be less liquid than shares of unconstraint firms. If constraint firms pay higher dividends and make their shares more liquid, their share prices will increase and stock returns will also increase. The insignificant results of hypothesis testing were explained by Safari (2010) who examined "Dividend Yield and Stock Return in Different Economic Environments: Evidence from Malaysia" and found that in developed countries a positive relationship between dividend yield and stock return occurs when bear markets and negative when bull market; whereas in the emerging market there is a positive relationship between dividend yield and stock return both in the bear market and bull market.

4 CONCLUSION

Based on the results of the research and discussion that has been stated, it can be concluded that there is a negative relationship between illiquidity and stock return. However, because there is a time factor that also affects, the results found are not significant (significant at the 10 percent level). Size had a significant positive effect, contrary to the hypothesis that has been formulated that size has a negative effect on stock return. This can be caused by factors such as

market inefficiencies or measures used as a proxy for risk not being able to capture risks effectively. Beta had no significant positive effect, which can be caused by several factors such as up and down market conditions, corporate governance, and the economic structure of business organizations. The relationship between risk and stock return also contradicts the hypothesis that has been formulated, which is significantly positive. Likewise, the relationship between dividend yield and stock return was positive and not significant.

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E. Ernawati & A. Herlambang
University of Surabaya, Surabaya, Indonesia

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1 INTRODUCTION

Stock liquidity is a critical factor for investors to consider because liquidity is related to the speed and ease of a stock to be traded so that it will affect the stock price and also stock return. Several researchers have tested the effect of illiquidity on stock returns. The results obtained were not consistent with each other.

Amihud & Mendelson (1989), Amihud (2002), Cao & Petrasek (2014), and Amihud (2015) in Nanlohy et al. (2018) examined the effect of illiquidity on stock returns. Research by Amihud & Mendelsen 1989 was conducted using the New York Stock Exchange (NYSE) stock trading data over the 1960-1979 periods. Amihud (2002) used the NYSE stock trading data over the 1964-1997 periods. Cao & Petrasek (2014) conducted during the financial crisis, used US company stock data listed on the NYSE, AMEX, and NASDAQ over the 1993-2011 periods. Whereas Amihud 2015 examined the stock market in 45 countries consisting of 19 emerging markets and 26 developed markets over the 1990-2011 period. The results obtained remain consistent that illiquidity has a positive effect on stock returns.

Harris & Amato (2019) have replicated Amihud 2002 research. The research used NYSE trading data sourced from the same database, namely the Center for Research of Securities Prices (CSRP) and the same period (1964-1997) as well as a simpler annual mean of stock's daily illiquidity measurement. The results obtained were also the same, that illiquidity has a positive effect on stock returns. Harris & Amato (2019) also carried out additional analyzes over the 1998-2015 period. The result remained significant, but the strength of its positive influence disappears and turns into negative. Marzva (2019) also examined the effect of illiquidity on stock returns on the Johannesburg Stock Exchange with monthly time series data over the 2007-2016 period. The results obtained remain the same, that illiquidity has a positive effect on stock returns.

Besides illiquidity, the independent variables studied by Nanlohy et al. (2018) were size, risk, dividend yield, and beta. The results obtained are size, risk, and dividend yield have a negative effect, while beta has a positive effect on stock return. The effect of size on stock returns was examined by Situmeang & Muharam (2015) and Farhan & Sharif (2015), found a negative relationship between size and stock return. Tapa & Hussin (2016) and Chiang & Zhang (2017) also examined the effect of risk on stock returns and obtained results that risk has a negative effect on stock returns.

The effect of dividend yield on stock return is in accordance with the relevant dividend theory developed by Gordon & Lintner (1956) in the bird-in-the-hand argument put forward by Gitman & Zutter (2012), that dividend yield has a negative effect on stock return.

The effect of beta on stock return was investigated by Theriou et al. (2004) and Murhadi & Irawan (2012),

who found beta results to be positively related to stock returns. Theriou et al. (2004) find a positive relationship when the market is up.

This study aims to examine the effect of illiquidity, size, risk, dividend yield, and beta on stock return on companies listed on the Indonesia Stock Exchange over the 2013-2017 period. The hypotheses to be tested are:

H1: Illiquidity has a positive effect on stock return;
H2: Size has a negative effect on stock return;
H3: beta has a positive effect on stock returns;
H4: Risk has a negative effect on stock return;
H5: Dividend yield has a negative effect on stock return.

2 RESEARCH METHODS

This research is categorized as basic research, namely research that results in the form of scientific development or the discovery of new theories. The approach used was quantitative because the data were quantitative and processed using quantitative methods. Based on its objectives, this research is causal-conclusive research, which is a study that discusses the causal relationship, tests hypotheses, and draws conclusions. The population of this research was 555 companies listed on the Indonesia Stock Exchange (BEI) over the 2013-2017 period. While the target population were companies that met the following criteria: (1) Companies that are not from the financial and investment sectors, (2) have audited financial statements over the 2013-2017 period, (3) completed stock price data over the 2013-2017 period, and (4) did not carry out stock split and reverse stock. The data used in this study was secondary data obtained from various sources. This study used historical data taken from the Indonesia Stock Exchange (www.idx.co.id) in the form of financial statements and stock prices. Data was also obtained from the Yahoo Finance website (www.finance.yahoo.com).

The measurement level in this study was the ratio scale, which is a unit that reflects the actual value. The independent variables were liquidity, size, beta, risk, and dividend yield, while the dependent variable was stock return.

The formula for measuring illiquidity is:

$$ILLIQ_{iy} = 1/D_{iy}\sum_{t=1}^{Diy}\left|R_{iyd}\right|/ VOLD_{iyd}$$

where:

$ILLIQ_{iy}$ = illiquidity of share i in year y
D_{iy} = number of days share i in year y
R_{iyd} = stock return i on day d year y
$VOLD_{iyd}$ = volume of stock i on day d of y

Size variable was measured using the formula:

Size = Ln market capitalization

Beta variable was measured using the formula:

Rj = a + bRm

Where:

Rj = stock return
Rm = market return
a = intercept of regression

Risk variable was measured using the formula:

$$\sigma = \sqrt{\frac{\sum_{i=1}^{N}(R_{it} - \bar{R}_i)^2}{N-1}}$$

Where:

σ = standard deviation
N = number of periods
R_{it} = return in period i
$\bar{R}_i$ = Average return for the period

Dividend yield was measured using the formula:

$$Dividend\ yield = \frac{\text{Dividend per share outstanding}}{Price\ per\ share}$$

While the stock return as the dependent variable was measured by the formula:

$$Rt = ln\frac{Pt}{Pt-1}$$

where:

Rt = return at time t
Pt = Share price at time t
Pt-1 = Share price at time t-1

This study used multiple linear regression analysis as a data processing method. This analysis was conducted to determine the effect of the independent variables on the dependent variable. As the data used was panel data, Eviews 8 was used for data processing. The multiple linear regression model can be stated in the following equation:

$$Rt = \alpha + \beta_1 ILLIQ + \beta_2 SIZE + \beta_3 BETA + \beta_4 STDEV + \beta_5 DYIELD + e$$

Where:

Rt	: Stock return
α	: Constant
ILLIQ	: Illiquidity
Size	: Company size
Beta	: Beta (systematic risk measurement tool)
STDEV	: Risk
DYIELD	: Dividend yield
E	: Error term

3 RESULT AND DISCUSSION

After the data collection and tabulation process have been completed, the next step was to process the data using descriptive statistics. In accordance with the population characteristics that have been set, then the number of companies that met the criteria were 67 companies listed on the Indonesia Stock Exchange. With a research period of 5 (five) years, namely 2013-2017, the data studied 335 observations. The following table 1 presents the results of data processing with descriptive statistics for the variables used in this study.

Table 1. Descriptive Data of Companies Listed on the Indonesia Stock Exchange over the 2013-2017 period

	STOCK RETURN	SIZE	BETA	DIVIDEND YIELD	RISK	IL-LIQ
Mean	0.007	29.528	0.773	0.394	0.105	6.780
Median	0.002	29.633	0.728	0.018	0.091	2.100
Maximum	0.397	33.687	1.964	35.693	0.678	0.074
Minimum	-0.095	25.377	-0.362	0.002	0.022	-0.030
Std. Dev.	0.040	1.868	0.559	3.194	0.066	0.005
Skewness	3.173	-0.232	0.129	9.601	4.289	11.937
Kurtosis	29.721	2.502	1.936	98.507	33.103	220.798
Jarque-Bera	10,528.460	6,460	17.883	132,468.200	13,675.590	670,081.40
Prob.	0.000	0.039	0.000	0.000	0.000	0.000
Sum	2.205	9,891.788	258.721	131.902	35.116	0.023
Sum Sq. Dev.	0.540	1,165.754	104.521	3,406.830	1.467	0.007
Obs.	335	335	335	335	335	335

Sumber: Hasil pengolahan data

Before conducting data processing using multiple linear regression models, the classical assumption test was performed first.

Table 2. The Results of Regression Analysis

Variable	Coefficient	Std. Error	t-Statistic	Probability	Hypothesis
C	-1.381301	0.130798	-10.56055	0.0000	
ILLIQ.	-0.391833	0.230277	-1.701569	0.0900*	Positive
SIZE	0.046033	0.004431	10.38869	0.0000***	Negative
BETA	0.005906	0.004235	1.394727	0.1643	Positive
RISK	0.225817	0.022735	9.932638	0.0000***	Negative
DIV YIELD	0.001070	0.000947	1.130239	0.2594	Negative

*, significance at the 10% level; **, significance at the 5% level; ***, means significance at the level of 1%.
Source: Data processing results

Afterward, the model compatibility test was performed by using the Chow test and Hausman test, both with random effects and fixed effects. The Hausman gives the best results, as presented in table 2.

Based on table 2, it is known that illiquidity had a negative effect on stock return with a significance level of 10 percent. These results are not in accordance with the formulated hypothesis that illiquidity has a positive effect on stock returns. Harris and Amato (2019), who replicated Amihud's 2002 research, found the same results when using the same data used by Amihud. However, when the research was expanded with the 1998-2015 data, the results turned negative, even though it still has a significant effect. The strength of the positive influence was lost and turned negative. Application of the 2002 Amihud method by Harris and Amato (2019) in more recent data shows that the results of Amihud in his analysis turned out to be time-dependent.

For insignificant results (significant at the 10 percent level) Chelley-Steeley et al. (2015) stated that the illiquidity ratio could be a biased measurement when the measurement period includes non-trading days, i.e., days on which securities are not traded. Measurement problems arise because there is zero trading volume. The mathematical software used to calculate liquidity ratios cannot be divided by zero. The elimination of the zero volume has an impact on the absolute nature of the return, which serves to reduce the liquidity ratio, thus causing the illiquidity ratio to increase. The overall effect of this problem increases the bias in the ratio. Therefore, illiquidity is not significant for stock return.

Size had a positive and significant effect, with a significance level of 1 percent. The higher the company size, the greater the stock return given. These results are not in accordance with the formulated hypothesis that size has a negative effect on stock returns. Mohanty (2002), in her research, found that size is positively related to stock return. She did not deny the opinion of Fama and French in their research in 1993, 1995, and 1996 that size is a proxy for several risk factors and premium size is the price of that risk. It is also possible that market inefficiencies cause premium size. In a related study, it was found that the measure used might indeed be a proxy for risk. However, this does not explain all the differences in the returns between small and large stock portfolios. Patel (2012), in his study, using the 1996-2010 period, compared small with large firms in developed stock markets and emerging stock markets using premium size (small firm return minus large firm return). He stated that both the size effect and

the reverse size effect in developed stock markets and emerging stock markets are no longer available. The premium size found in developed stock markets is positive for 10 years and negative for 4 years, whereas premium size for emerging stock markets was found to be negative for 5 years and positive for 9 years. This shows the existence of inconsistent results.

The beta variable had a positive effect, but it was not significant. The significance level found was 0.1643 or 16.43 percent. The positive relationship between beta and stock return shows that the higher the systematic risk as measured by beta, the greater the stock return. The positive relationship between beta and stock return is supported by Theriou et al. (2004) results. In his research, he distinguished between positive and negative market excess returns because without that distinction will result in a flat unconditional relationship between return and beta. By using conditional CAPM and cross-sectional regression analysis, the evidence in this paper tends to support significant positive relationships in the upmarket and significant negative relationships in the down market. Considering the period of this research is 2013-2017, where the condition of the Indonesia Stock Exchange (IDX) was up, then the relationship found is positive. Unfortunately, the results obtained from hypothesis testing were not statistically significant. This is explained by Novak and Petr (2010) that the relationship between beta and stock return does not apply on average, or the size tested may not be able to capture risk effectively. Factors such as the type of corporate governance and the economic structure of a business organization can also influence the significance of the risk factors considered.

Risk had a significant positive effect with a significance level of 1 percent, which means the higher the risk, the greater the stock return the investor wants. The results of this study are not in accordance with the formulated hypothesis that says the relationship between risk and stock return is negative but in accordance with the results of the research by de Mendonça et al. (2012) who found a positive relationship between risk and stock return. He examined idiosyncratic risk and conditional idiosyncratic risk with stock returns in the Brazilian stock market throughout July 2005-December 2010. He indeed used two types of models to achieve his research objectives, namely, first, residuals of regressions based on the Fama and French Three-Factor Model to estimate idiosyncratic volatility, and secondly, the EGARCH model, to estimate conditional volatility.

The dividend yield variable had a positive effect meaning that the higher the dividend yield, the greater the stock return obtained. However, the results of hypothesis testing are not significant. This positive relationship is in line with the findings of Lemmon and Nguyen (2017), who examined the relationship between dividend yield and stock return with the study sample were all listed stocks of the Hong Kong Stock Exchange over the 1981-2010 period. The variables in this study consisted of the dependent variable, namely stock return and the independent variables, namely size and dividend yield. Lemmon and Nguyen (2017) found that dividend yield has a positive effect on stock return, while size has a negative effect on stock return. Nguyen (2017), in his research on Stock Market Liquidity: Financially Constrained Firms and Share Repurchase" also found the same results that dividend yield has a positive effect on stock return. The dividend yield is treated as a control variable in testing stock market liquidity. He found that dividend yield has a significant positive effect on both constraints and unconstrained firms. The higher the dividend yield, the more liquid stocks are. Liquid stocks are stocks that are preferred by investors, so they are more widely bought and have an impact on rising stock prices and, subsequently, on stock returns. The shares of constraint firms tend to be less liquid than shares of unconstraint firms. If constraint firms pay higher dividends and make their shares more liquid, their share prices will increase and stock returns will also increase. The insignificant results of hypothesis test were explained by Safari (2010) who examined "Dividend Yield and Stock Return in Different Economic Environments: Evidence from Malaysia" and found that in developed countries a positive relationship between dividend yield and stock return occurs when bear markets and negative when bull market; whereas in the emerging market there is a positive relationship between dividend yield and stock return both in the bear market and bull market.

4 CONCLUSION

Based on the results of the research and discussion that has been stated, it can be concluded that there is a negative relationship between illiquidity and stock return. However, because there is a time factor that also affects, the results found are not significant (significant at the 10 percent level). Size had a significant positive effect, contrary to the hypothesis that has been formulated that size has a negative effect on stock return. This can be caused by factors such as

market inefficiencies or measures used as a proxy for risk not being able to capture risks effectively. Beta had no significant positive effect, which can be caused by several factors such as up and down market conditions, corporate governance, and the economic structure of business organizations. The relationship between risk and stock return also contradicts the hypothesis that has been formulated, which is significantly positive. Likewise, the relationship between dividend yield and stock return was positive and not significant.

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